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The Eurasian Dry Grassland Group (EDGG) in 2019–2020

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Abstract

This report summarizes the activities and achievements of the Eurasian Dry Grassland Group (EDGG) from July 2019 to December 2020. During this period, Covid-19 allowed only one live event, the 14th EDGG Field Workshop to the alpine vegetation of Switzerland, organised *ad hoc* as a replacement for the cancelled Field Workshop in the Ukrainian steppes. The cancelled Eurasian Grassland Conference in Spain found a partial replacement in "Talk Grasslands!", a series of online talks during winter 2020/2021. EDGG's own diamond open access periodical, *Palaearctic Grasslands*, is a novel combination of scientific journal, photo magazine and member newsletter. With five issues during the reporting time it contributed much to EDGG's attractiveness. EDGG edited four Special Features in international journals (*Tuexenia*, *Hacquetia*, *Flora*) and contributed 13 chapters on grasslands and shrublands of the Palaearctic biogeographic realm to the *Encyclopedia of the world's biomes*. EDGG's vegetation-plot database GrassPlot with multi-scale and multi-taxon diversity data of grasslands and other open habitats of the Palaearctic is now integrated into the EDGG website with the GrassPlot Diversity Explorer.

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Izvleček
V poročilu povzemamo vse aktivnosti in dosežke Skupine za evrazijska suha travišča (EDGG) med julijem 2019 in decembrom 2020. V tem obdobju smo zaradi Covid-19 izvedli le en dogodek v živo, 14. EDGG terensko delavnico o alpinski vegetaciji Švice, ki je bila organizirana *ad hoc* namesto odpovedane terenske delavnice v ukrajinskih stepah. Odpovedano konferenco o evrazijskih travišč v Španiji smo delno nadomestili s "Talk Grasslands!", serijo spletnih predavanj pozimi 2020/2021. *Palaearctic Grasslands* je EDGG-jeva diamantna odprto-kodna revija in predstavlja novost kot kombinacija znanstvne revije, foto časopisa in članskega glasila. S petimi številkami v obdobju poročanja je močno prispevala k prepoznavnosti EDGG. Skupina je uredila štiri posebne izdaje v mednarodnih revijah (*Tuexenia*, *Hacquetia*, *Flora*) in prispevala 13 poglavij o travišč in grmišč Palerktičnega območja v knjigi *Encyclopedia of the world's biomes*. EDGG-jeva vegetacijska podatkovna baza GrassPlot s podatki različnih prostorskih nivojev in taksonov o travišč in drugih odprtih habitatih v Palearktiku je sedaj vključena na EDGG spletno stran z vmesnikom GrassPlot Diversity Explorer.

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Introduction

Since 2014, the Eurasian Dry Grassland Group (EDGG; Vrahnakis et al. 2013) has been editing Grassland Special Features in *Hacquetia* (Apostolova et al. 2014). This is now the 6th such Special Feature and we would like to take this opportunity to report about the activities and achievements of EDGG since the last such report (Dengler et al. 2019), i.e. for the period from July 2019 to December 2020.

Status and activities

EDGG is a Working Group of the International Association for Vegetation Science (IAVS; www.iavs.org), with a focus on fauna, flora, vegetation and conservation of all natural and semi-natural grasslands of the whole Palaearctic biogeographic realm. Membership can be obtained free of charge by sending an e-mail to the Membership Administrator Idoia Biurrun (idoia.biurrun@ehu.es). As of 31st December 2020, we had 1340 members from 64 countries.

During the reporting period, the new EDGG website (https://edgg.org/) was further expanded and enriched. The most conspicuous addition is the new section "Databases". Here the submenu item "Introduction" explains why vegetation-plot databases are of outstanding importance for biodiversity research. The submenu items "GrassPlot" and "GrassPlot Diversity Explorer" introduce the EDGG-associated collaborative database GrassPlot (see below). "Regional databases" presents the currently five EDGG-associated databases BDGD (Balkan Dry Grassland Database: 11,396 plots), GrassVeg.DE (German Grassland Vegetation Database: 10,371 plots), NBGVD (Nordic-Baltic Grassland Vegetation Database: 12,048 plots), RGD (Romanian Grassland Database: 42,860 plots) and UGD (Ukrainian Grassland Database: 11,758 plots). Finally, "Publications using our data" provides access to publications that directly result from GrassPlot and the five regional databases, as well as publications from the European Vegetation Archive (EVA) and the global vegetation-plot database sPlot that used data from these. Other major changes to our website include (i) new submenu item "Talks" (see below), (ii) "Past Field Workshops" where you can find information on all our past Field Workshops, (iii) "Ongoing Special Features", which is now up to date, and (iv) "Past Special Features", where currently 29 completed Special Issues/Special Features edited by EDGG are presented, mostly with links to the pdf's of the articles. We have also launched an EDGG YouTube channel in 2020 for the distribution of videos relevant to our events. The channel can be conveniently accessed via the link on our website.

In 2020, Covid-19 prevented us from conducting our planned events, the 14th Field Workshop in Southern Ukraine in May – June and the 17th Eurasian Grassland Conference (EGC) in Tolosa, Spain, in September. We decided not to cancel them but to postpone them to 2021, with the hope that these and all further Field Workshops and Eurasian Grassland Conferences will then be conducted one year later than originally planned. On the brighter side, 2020 was not completely void of EDGG events. In a time window between the first and the second Corona wave, some EDGG activists organ-




Figure 1: Impressions from the only EDGG live event conducted during the reporting time, the 14th EDGG Field Workshop to the alpine habitats of Switzerland. Left: expedition team (except Jinghui Zhang, who joined later) at Alp Glivers, canton of Grisons. Right: the richest plot of the expedition, an alpine limestone grassland at Fissetengrat, canton of Uri, with approx. 150 species including bryophytes and lichens in 100 m² (Photos: J. Dengler).

Slika 1: Vtisi z edinega dogodka EDGG v živo v poročevanem obdobju. 14. EDGG terenske delavnice o alpinskih habitatih v Švici. Levo: odprava (manjka Jinghui Zhang, ki se je pridružil kasneje) na Alp Glivers v kantonu Grisons. Desno: vrstno najbogatejša ploskev med odpravo - alpinski travnik na apnencu na lokaciji Fissetengrat v kantonu Uri s približno 150 vrstami (vključno z mahovi in lišaji) na 100 m² (fotografije J. Dengler).

ised an *ad hoc* alternative 14th EDGG Field Workshop in Switzerland, from 4th to 14th September. While all the previous Field Workshops were devoted to dry grasslands s.l., this was the first to study any type of subalpine and alpine open vegetation, from grasslands via heathlands and screes to snowbeds and fens, thus filling important data gaps in EDGG's database GrassPlot (Dengler et al. 2018). The nine participants were able to demonstrate that alpine grasslands can be extraordinarily species rich, that there is a consistent richness difference between base-rich and base-poor stands of the same habitat type and that bryophytes and lichens play a much larger role here than in lowland habitats (Dengler et al. 2020c; Figure 1).

In winter 2020/2021, we introduced "Talk Grasslands!", an online lecture series featuring internationally renowned grassland experts. The aim is to provide an online opportunity to be engaged in the latest grassland research and conservation studies, and hear inspiring talks during the winter time. The first such talk was broadcast in December and was very well attended; two more talks will follow in early 2021. The recordings of these presentations are freely available on the EDGG website (https://edgg.org/talks).

At the end of 2019, we announced a competition for designs for EDGG T-shirts motif. Seven submitted proposals were evaluated by a jury of eight judges, consisting of Alla Aleksanyan, Didem Ambarlı, Idoia Biurrun, Iwona Dembicz, Riccardo Guarino, Monika Janišová, Stephen Venn and Denys Vynokurov. The winner was a proposal prepared by Rocco Labadessa. It will be used for EDGG T-shirt production in 2021. The T-shirts will be distributed mainly during the EDGG events.

Palaearctic Grasslands

Palaearctic Grasslands (PG) is the scientific journal and bulletin of the EDGG. During the time period covered here, PG developed well, with five issues (No. 43–47) and a total of 390 pages being published (https://edgg.org/publications/bulletin). Like its predecessors (*Bulletin of the Eurasian Dry Grassland Group, Bulletin of the European Dry Grassland Group*), PG continues to serve as our newsletter for EDGG members, to inform them about forthcoming and past events of the working group. It has now also become an attractive magazine that visualises the beauty of Palaearctic grasslands, their flora and fauna with stunning photographs. Our Photo Editor (Rocco Labadessa) selects for each issue the best photos among those submitted by EDGG members for the cover page and for general illustrative purposes. Moreover, together with a jury, he conducts "Photo Competitions" on given topics, of which the winning photographs are presented in the next PG issue. During the reported period, the competitions on "Grasses and grasslands" (PG 45) and "Managing grasslands" (PG 46) yielded submissions of 48 photos, and a winner (see Figure 2), second and third prize each. Unfortunately, some competitions could not be concluded due to a too small number of photos received. Finally, there are two article types specifically devoted to photography, "Photo Story" and "Glimpses of a Grassland". The Photo Stories is a well-established format used by EDGG members to visualise the beauties of certain grasslands and their inhabitants on 3–10 pages with little text, e.g. on the Hortobágy National Park in Hungary (Borza et al. 2020) or the Biebrza National Park




Figure 2: Winning photographs of the two photo competitions that have been completed during the reporting time. Left: *Stipa ucrainica*, *Koeleria macrantha* and *Poa bulbosa*. Askania-Nova Biosphere Reserve, Ukraine (Photo: I. Dembicz). Right: Fresh hay of Carpathian grasslands, Putyla district, Chernivtsi oblast, Ukraine (Photo: A. Kuzemko).
Slika 2: Zmagovalni fotografiji dveh fotografskih natečajev, ki sta potekala v poročevalnem obdobju. Levo: *Stipa ucrainica*, *Koeleria macrantha* in *Poa bulbosa*. Askania-Nova biosferni rezervat, Ukrajina (foto: I. Dembicz). Desno: sveže pokošena trava na travnikih v Karpatih, district Putyla, regija Chernivtsi, Ukrajina (foto: A. Kuzemko).

in Poland (Dembicz et al. 2020). The Glimpses of Grasslands have been introduced by the Chief Editor Team during the first Corona lockdowns to "compensate" for the difficulties to do fieldwork. Members were invited to present their favoured grassland in two pages. In PG issue 46, in which the article type was introduced, 12 such Glimpses were published, from Spain in the west to the Russian Far East, after which they have become a regular feature of PG.

During the past 18 months, PG has also more and more established itself as an outlet for peer-reviewed scientific articles. PG is a diamond open access journal, i.e. publication is free of charge for both authors and readers, and the peer-review process is fast. There are four article types: "Research Article", "Review", "Forum Article" and "Scientific Report". Most popular so far are the Scientific Reports, of which seven have been published: four on the results of the EDGG Field Workshops 11–14 (e.g. Dengler et al. 2020c), one on the GrassPlot database (Biurrun et al. 2019), one on a methodological extension to the EDGG standard biodiversity sampling method for orthoptera (Hilpold et al. 2020) and one on the development of the Emerald network in Ukraine (Kuzemko et al. 2020). Research Articles are still infrequent in PG, but there was one regional monograph on the alpine grassland vegetation of a region in Switzerland (Pachlatko et al. 2019) and one on grasslands in recreational parks in Ukraine (Kovtoniuk 2020). It should be emphasized that Research Articles are an attractive publication venue for smaller studies, e.g. from Bachelor and Master theses, which are typically too local for other international scientific journals, whereas the rules of PG only require scientific soundness of the analyses, without any requirement for studies to be particularly comprehensive or yield novel insights.

EDGG-edited publications

Since 2004, when EDGG's predecessor Arbeitsgruppe Trockenrasen was founded, 31 Special Issues/Special Features have been published in scientific journals and books (see https://edgg.org/index.php/publ/pastsfeatures, though the two most recent ones are not available there yet). During the reporting period, five new such EDGG-edited article collections came out:

The 5th EDGG Special Feature in *Hacquetia*, with seven contributions and 89 pages on the topic of "Conservation and diversity of Palaearctic grasslands", edited by Orsolya Valkó, Stephen Venn, Rocco Labadessa, Salza Palpurina, Sabina Burrascano and Atushi Ushimaru, was published in summer 2019 (Valkó et al. 2019). The 14th EDGG Special Feature in *Tuexenia*, with seven contributions and 123 pages on the topic of "Restoration, monitoring, conservation and phytosociology of semi-natural and natural grasslands in Central Europe", edited by Balázs Deák, Thomas Becker, Steffen Boch, Jürgen Dengler and Viktoria Wagner, was published in autumn 2019 (Deák et al. 2019). In autumn 2020, the 15th EDGG Special Feature in *Tuexenia*, with nine contributions and 171 pages on the topic of "Traditional land use, management and biodiversity of European semi-natural grasslands", under the editorship of Steffen Boch, Thomas Becker, Balázs Deák, Jürgen Dengler

and Viktoria Wagner, was published (Boch et al. 2020). In spring 2020, 13 chapters totalling 183 pages and edited by Jürgen Dengler and Péter Török on behalf of EDGG appeared in the five-volume book *Encyclopedia of the world's biomes*. In the regional chapters, numerous EDGG authors covered the grasslands and shrublands of the Palaearctic biogeographic realm in a comprehensive and consistent manner, while Dengler et al. (2020b) provided a synthesis on the current knowledge on the biogeography, biodiversity and ecology of Palaearctic grasslands, thus updating earlier EDGG reviews on that topic (Dengler et al. 2014, Wesche et al. 2016, Török & Dengler 2018). For the first time, in EDGG publications also the Caucasus countries were covered (Ambarlı et al. 2020). In collaboration with the Editorial Board of *Flora*, EDGG published a Virtual Special Feature in 2020 on the ecology and evolution of steppe biodiversity, containing 12 research papers with 75 authors from 13 countries (Török et al. 2020).

Currently, three new EDGG-edited Special Features are in preparation, apart from the traditional ones in *Hacquetia* and *Tuexenia*, also one in *Vegetation Classification and Survey* on the classification of grasslands and other open habitats in the Palaearctic, of which the first paper just came out on the tall forb vegetation of Tajikistan and neighbouring regions (Nowak et al. 2020).

GrassPlot

GrassPlot is the EDGG-associated, collaborative database of high-quality multi-scale vegetation-plot data of grasslands and other open habitats in the Palaearctic (Dengler et al. 2018, Biurrun et al. 2019). Among others, it hosts the data collected during the EDGG Field Workshops, but is open to any other contributions, preferentially following the EDGG standardised sampling methodology (Dengler et al. 2016), or at least meeting the minimum quality criteria of GrassPlot (https://edgg.org/databases/GrassPlot). The current GrassPlot version v.2.10 of 1st October 2020 contains 202,579 vegetation plots of different grain sizes, including 6,664 nested-plot series with at least two different grain sizes. They stem from 49 countries, 225 datasets and 309 data owners.

So far, GrassPlot has published three publications, two database reports (Dengler et al. 2018; Biurrun et al. 2019) and a macroecological study (Dengler et al. 2020a). The latter analysed the shapes of species-area relationships (SARs) at fine grain sizes in Palaearctic grasslands and found that the power law is by far the best general model.

Recently, the GrassPlot homepage has been transferred from the Ecoinformatics Portal Bayreuth to the EDGG website (https://edgg.org/databases/GrassPlot). It has been substantially updated and now contains rich information on the background, current content, the Governing Board, ongoing and completed projects, the initial workshop and further documents of GrassPlot.

Moreover, the GrassPlot Diversity Explorer has been launched on a separate page within the EDGG website (https://edgg.org/databases/GrasslandDiversityExplorer). The GrassPlot Diversity Explorer allows dynamic online analyses of the up-to-date content of GrassPlot. Also available are the GrassPlot Diversity Benchmarks, which contain descriptive statistics for grassland diversity of any combination of grain size × taxonomic group × region × vegetation type. Both the analyses of the Explorer and the data of the Benchmarks are provided with open access under CC-BY license and thus allow their utilization in research and conservation.

Author contributions

The authors jointly form the Executive Committee of EDGG for the period 2019–2021. J.D. led the writing with all other authors contributing parts and/or revising the text.

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